

We claim:

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1. A membrane comprising a composition including

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- (a) 1 to 99 wt-% of at least one polyurethane elastomer comprising at least one hard segment and at least one soft segment, and
- (b) 99 to 1 wt-% of a solid,

wherein said solid is incorporated in said at least one polyurethane elastomer.

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2. A membrane according to claim 1, wherein the at least one polyurethane elastomer is a thermoplastic polyurethane elastomer.

3. Membrane according to claim 1 or 2, wherein the solid has a primary particle size of 0.005 to 30 microns.

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4. Membrane according to any of the claims 1 to 3, wherein the polyurethane elastomer has at least one of the following characteristics:

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- (a) a melting point of the hard segment of more than 100 °C, and
- (b) the soft segment comprises ether linkages, ester linkages or carbonate linkages or a combination of two or more thereof.

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5. Membrane according to any of the claims 1 to 4, wherein the solid is an inorganic basic compound which is selected from the group consisting of oxides, mixed oxides, silicates, sulfates, carbonates, phosphates, nitrides, amides, imides and carbides of the elements of the I., II, III, or IV. main group or the

IV. side group of the periodic table; a polymer being selected from the group consisting of polyethylene, polypropylene, polystyrene, poly(tertrafluor-ethylene), poly(vinylidene fluoride), polyamides, polyimides; a solid disper-
sion comprising such a polymer, or mixtures of two or more thereof.

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6. Composite comprising at least one first layer comprising an electron-
conducting electrochemically active compound, and at least one second layer
comprising the membrane according to any of the claims 1 to 5 and being free
of an electron-conducting electrochemically active compound.

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7. Composite according to claim 6, wherein said at least one first layer comprises
an electron conducting electrochemically active compound being generally used
for cathodes.

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8. Composite according to claim 6, wherein said at least one first layer com-
prises an electron-conducting electrochemically active compound, as gener-
ally used for anodes.

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9. Use of a membrane according to any of the claims 1 to 5 as a separator in elec-
trochemical cells.

10. An electrochemical cell which comprises a membrane according to any of the
claims 1 to 5 or a composite according to any of the claims 6 to 8 or a combina-
tion of two or more thereof.

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